

REMARKS

In view of the above-amendments and the following remarks, reconsideration and further examination are requested.

By this amendment, claims 19-27 have been canceled in favor of new claims 28-36, respectively. Therefore, claims 1-27 are canceled and claims 28-36 are pending.

In item 4 of the Office action, claims 19-27 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. This rejection is traversed for the following reasons.

With regard to claims 19, 20, 25, and 26, the Examiner asserts that the limitation of "said filter being operable to filter the n-level digital mapped signal" wherein "the filter having a VSB characteristic, which covers a frequency band including a carrier frequency, and a roll-off characteristic, which covers a frequency band not including the carrier frequency" is not adequately described.

Claims 19, 20, 25, and 26 have been replaced by new claims 28, 29, 34, and 35, respectively. It is submitted that the inventions recited in claims 19, 20, 25, and 26 are adequately described for the following reasons.

Please see Fig. 62(b) which shows the "characteristics of VSB filter." Fig. 62(b) illustrates that the VSB characteristic of the filter covers a frequency band including the carrier. Specifically note the slope on the left side of the filter characteristic intersecting the carrier. This slope is the VSB characteristic which covers a frequency band including a carrier frequency.

The VSB filter characteristic shown in Fig. 62(b) is discussed in column 48, lines 12-17. A more detailed embodiment of the VSB filter using FIR filters is shown in Fig. 174. Fig. 174 is a more detailed embodiment of part of the system shown in Fig. 84. Please see column 59, line 49 to column 60, line 23. As noted above, the VSB filter includes a characteristic that covers a frequency band including the carrier. Additionally, as noted by the Examiner and discussed in column 59, the FIR filters weight the signals with roll-off characteristics. Therefore, the VSB filter realized using the FIR filters shown in Fig. 174 exhibits a VSB characteristic as shown in Fig. 62(b) but also weighted with roll off characteristics. Moreover, it is also noted that Fig. 174

and column 59 clearly disclose that the circuitry implementing the VSB filter as a digital FIR filter also includes a mapper.

Based on the above remarks, it is submitted that the specification conveys with reasonable clarity to those skilled in the art that the applicants were in possession of the invention as claimed in claims 28, 29, 34, and 35.

With regard to claims 21 and 27, the Examiner asserts that the claimed VSB filter and de-mapper are not described in the specification. This rejection is traversed for the following reasons.

Claims 21 and 27 have been replaced by new claims 30 and 36, respectively. These new claims do not recite a de-mapper or demapping. Rather, Claim 30 recites a receiver operable to receive a VSB modulated signal resulting from a mapper and the filter discussed above with respect to claims 28, 29, 34, and 35. Likewise, Claim 36 recites receiving a VSB modulated signal resulting from a mapper and the filter discussed above with respect the claims 28, 29, 34, and 35.


Fig. 84 illustrates a system including a transmitter and a receiver for transmitting and receiving VSB modulated signals. As discussed above, column 59, line 49 to column 60, line 19 describes a more detailed embodiment of Fig. 84, which is illustrated in Fig. 174. For the reasons set forth above, it is submitted that the filter is adequately described. Moreover, Fig. 84 clearly illustrates a receiver operable to receive a VSB modulated signal resulting from the transmitter of Fig. 84, which may include mapper and filter of the more detailed embodiment shown in Fig. 174. Accordingly, it is submitted that the specification adequately describes the inventions recited in new claims 30 and 36.

Based on the above remarks, it is submitted that the specification complies with the written description requirement. Therefore, it is requested that the rejection under 35 U.S.C. § 112, first paragraph, be withdrawn and claims 28-36 allowed.

The Examiner is invited to contact the undersigned attorney by telephone to resolve any remaining issues.

Respectfully submitted,

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